

Amendments to the Claims

1-29 (Canceled)

30. (Currently Amended) Apparatus for manufacturing a fibrous mat comprising a first die source including spaced die orifices capable of feeding a first attenuated multiple fiber layered portion; a first selectively gap spaced longitudinally extending cylindrical first rotating self propelled collector surface to receive said first layered portion; a spaced second die source including spaced die orifices capable of feeding a second attenuating multiple fiber layered portion; a second gap spaced longitudinally extending cylindrical second rotating self propelled collector surface to receive said second fiber layered portion, said second rotating collector surface being spaced ~~from said first rotating collector surface~~ a distance in excess of the thickness of said first layered mat portion; and ~~transfer and orientation means at least one idle roller positioned between and spaced from~~ said first and second collector surfaces a distance in excess of the thickness of said first layered mat portion to orient and transfer said first layered mat portion from said first rotating collector surface to said second rotating collector surface.

31. (Original) The apparatus for manufacturing a fibrous mat of Claim 30, and at least one layered mat diverting apparatus positioned externally of one of said die sources to apply an external vortically creating force on part of one of said fiber layered portions before said portion reaches said cooperative rotating collecting source for said layered portion.

32. (Currently Amended) Apparatus for manufacturing a fiber filter mat comprising: a first melt blown die source including spaced die orifices capable of feeding a first attenuated multiple filter fiber layer portion; a first longitudinally extending self propelled rotatable collector surface

spaced from and aligned off center from a longitudinal axis with said first die source to eventually receive said first attenuated filter fiber portion; a spaced second melt blown die source including spaced die orifices capable of feeding a second attenuated multiple filter fiber portion; a second longitudinally extending self propelled rotatable collector surface spaced from and aligned off center from a longitudinal axis with said second die source to receive said second attenuated filter fiber portion, said first die source and said aligned first rotatable collector being spaced from said second die source and said aligned second rotatable collector; a plurality of spaced longitudinally extending idler rolls rollers positioned between and apart from said first and second rotatable collectors a distance in excess of the thickness of said first mat portion and said second mat portion respectively to orient and transfer said first layered mat portion from said first rotatable collector surface from a first selected cross-sectional quadrant to a second selected cross-sectional quadrant of said second rotatable collector surface; and at least one small collector diverter positioned in spaced relation to one of said die sources to apply an external vortically creating force to part of one of said fiber layered portions before said portion reaches said cooperative rotatable collector collecting surface for said portion, and, an additional work station positioned downstream said second rotatable collector to receive combined first and second mat portions.

33. (Currently Amended) Apparatus for manufacturing a fiber filter mat comprising:
at least two spaced successive melt blown die sources wherein each of said at least two spaced successive melt blown die sources have at least one spaced die orifice;

at least two longitudinally extending cylindrical rotatable collectors wherein one of said at least two longitudinally extending cylindrical rotatable collectors is aligned and selectively spaced from each of said at least two spaced successive melt blown die sources;

a motor and gear driven system in mechanical communication with each of said at least two longitudinally extending cylindrical rotatable collectors providing a rotational force to each of said at least two longitudinally extending cylindrical rotatable collectors making said collectors self propelled; and

at least one longitudinally extending idler roller, wherein at least one of said at least one longitudinally extending idler roller is positioned between and spaced from said rotatable collectors a distance in excess the thickness of a first mat portion each of said at least two longitudinally extending cylindrical rotatable collectors.

34. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein each of said at least two longitudinally extending cylindrical rotatable collectors has a perforated collector surface.

35. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 34 wherein each of said at least two longitudinally extending cylindrical rotatable collectors has a vacuum source in flow communication thereto.

36. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein each of said at least two longitudinally extending cylindrical rotatable collectors has an internal coolant.

37. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 33 further having a vortically force creating rotational cylindrical drum gap-spaced at preselected distance from at least one of said at least two longitudinally extending cylindrical rotatable collectors, said vortically force creating rotational cylindrical drum having a motor and gear driven system in mechanical communication thereto providing a rotational force in an opposite direction as said rotational force being applied to the said at least one longitudinally extending cylindrical rotatable collector to which said vortically force creating rotational cylindrical drum is gap-spaced therefrom.

38. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein said at least one of said at least one longitudinally extending idler rollers positioned between each of said at least two longitudinally extending cylindrical rotatable collectors is three idler rollers arranged in a substantially triangular configuration.

39. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein each of said at least two longitudinally extending cylindrical rotatable collectors being aligned and selectively spaced from each of said at least two spaced successive melt blown die sources are selectively spaced approximately in a range of 2 to 60 inches.

40. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 39 wherein each of said at least two longitudinally extending cylindrical rotatable collectors being aligned and selectively spaced from each of said at least two spaced successive melt blown die sources are selectively spaced at approximately 18 inches.

41. (Currently Amended) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein each of said at least two spaced successive melt blown die sources is aligned above a first cross-sectional quadrant, between 0° and 90°, of each of said at least two longitudinally extending cylindrical rotatable collectors.

42. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein a first of said at least two spaced successive melt blown die sources is aligned above a fourth cross-sectional quadrant, between 270° and 360°, of a first of said at least two longitudinally extending cylindrical rotatable collectors and a second of said at least two spaced successive melt blown die sources is aligned above a first cross-sectional quadrant, between 0° and 90°, of a second of said at least two longitudinally extending cylindrical rotatable collectors.

43. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein a first of said at least two spaced successive melt blown die sources is aligned above a first cross-sectional quadrant, between 0° and 90°, of a first of said at least two longitudinally extending cylindrical rotatable collectors and a second of said at least two spaced successive melt blown die sources is aligned above a fourth cross-sectional quadrant, between 270° and 360°, of a second of said at least two longitudinally extending cylindrical rotatable collectors.

44. (Currently Amended) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein a first of said at least two spaced successive melt blown die sources is aligned above a fourth cross-sectional quadrant, between 270° and 360°, of a first of said at least two longitudinally extending cylindrical rotatable collectors and a second of said at least two spaced successive melt blown die sources is aligned above a fourth cross-sectional quadrant, between

270° and 360°, of a second of said at least two longitudinally extending cylindrical rotatable collectors[[,]].

45. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein a work station is positioned downstream from a final of said at least two longitudinally extending cylindrical rotatable collectors.

46. (Currently Amended) An apparatus for manufacturing a fiber filter mat comprising:
a first and second self propelled cylindrical rotatable collector having cylindrical axes substantially horizontally aligned and having a space there between;
a first and second die source, said first die source being positioned above said first rotatable collector and angularly aligned off center from a longitudinal axis thereof feeding a first mat portion onto said first rotatable collector and said second die source being positioned above said second rotatable collector and angularly aligned off center from a longitudinal axis thereof feeding a second mat portion onto said second rotatable collector, said space between said first and said second rotatable collectors being in excess of a thickness of said first mat portion; and
at least one cylindrical rotatable idler roller having a cylindrical axis substantially horizontally aligned below and apart from said cylindrical axes of said first and second cylindrical rotatable collectors and having a cylindrical surface between cylindrical surfaces of said first and second cylindrical rotatable collectors.

47. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 46 wherein said first and second cylindrical rotatable collectors have vacuum source and perforated cylindrical surfaces.

48. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 46 wherein said first and second cylindrical rotatable collectors have a cooling source.

49. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 46 wherein said first and second cylindrical rotatable collectors are respectively spaced below said first and second die sources in a range of approximately two to sixty inches.